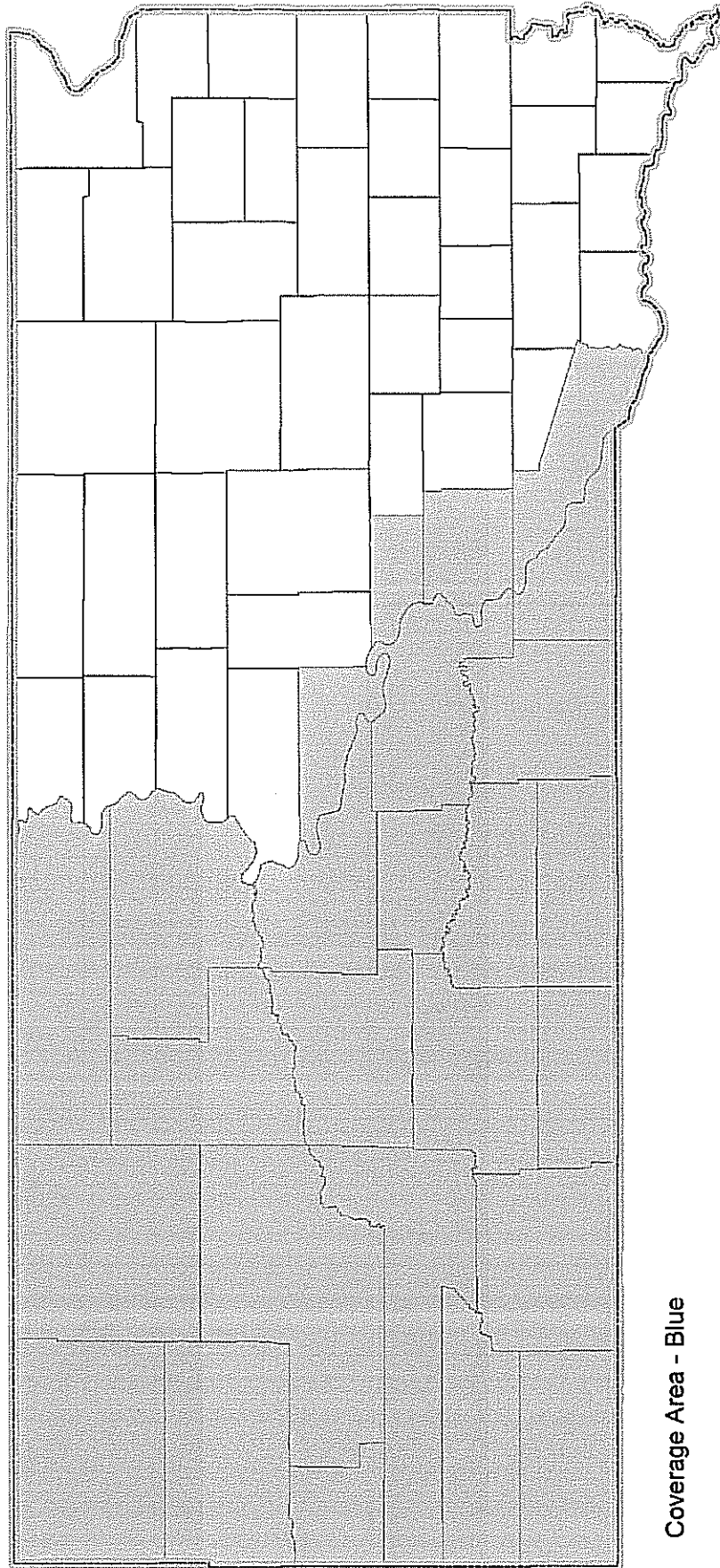
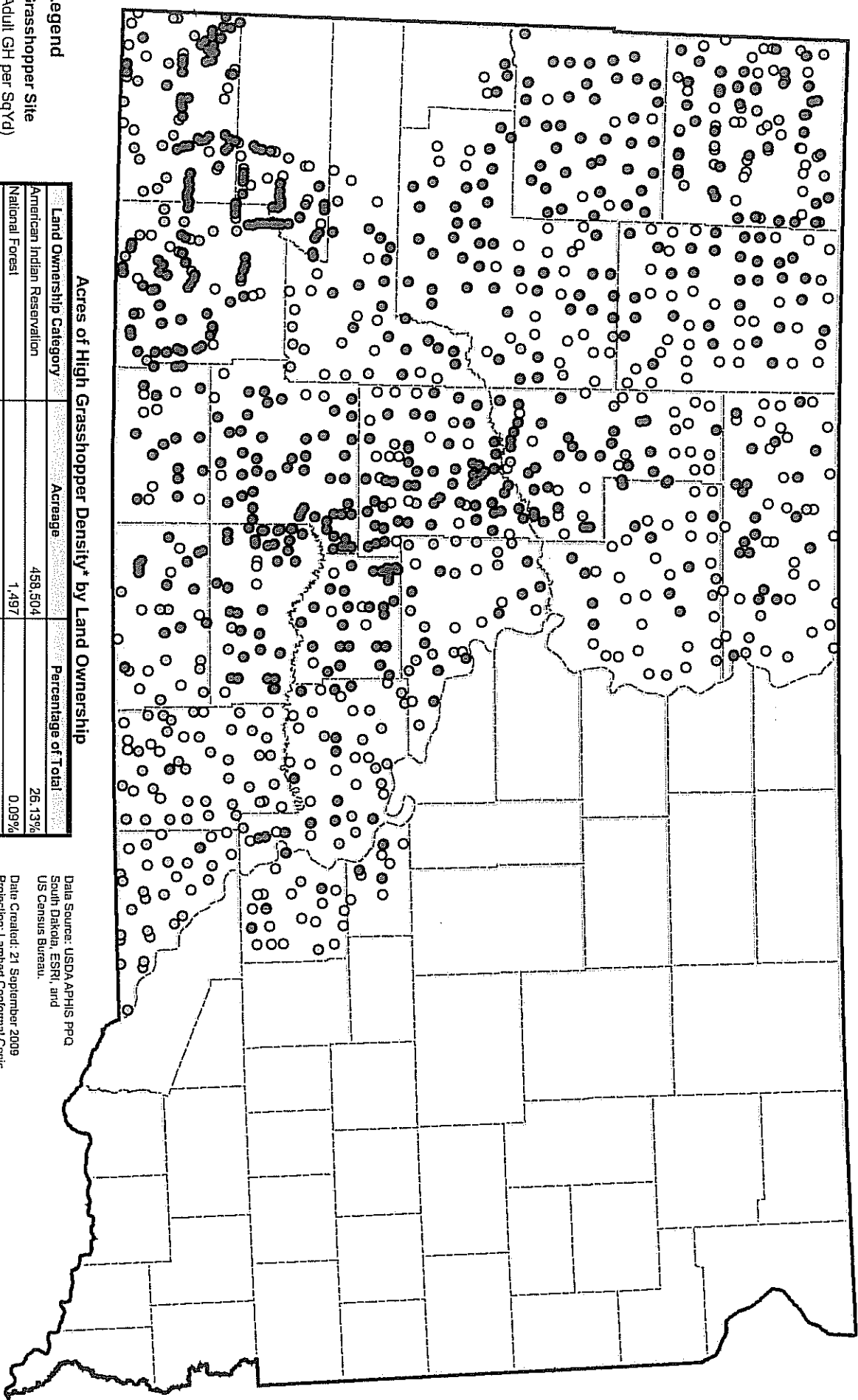


**Environmental Assessment Coverage Area**



Coverage Area - Blue

# 2009 Adult Grasshopper - South Dakota



Acres of High Grasshopper Density\* by Land Ownership

Land Ownership Category	Acres	Percentage of Total
American Indian Reservation	458,504	26.13%
National Forest	1,497	0.09%
National Grassland	122,564	6.98%
Private Land	1,172,400	66.80%
Total	1,754,965	100.00%

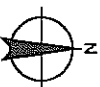
\* High Grasshopper Density = 8 or more grasshoppers per square yard.

Data Source: USDA APHIS PPQ  
 South Dakota, ESRI, and  
 US Census Bureau.

Date Created: 21 September 2009  
 Projection: Lambert Conformal Conic  
 Datum: NAD 1983  
 Coordinate System: State Plane  
 South Dakota FIPS 4002 Feet

This map was prepared by  
 USDA APHIS PPQ.

0 10 20 40 Miles



## APPENDIX 4



United States  
Department of  
Agriculture

Animal Plant Health  
Inspection Service

**RECEIVED**

MAR 23 2010

Plant Protection  
and Quarantine

P O Box 250  
Pierre, SD 57501  
Phone: 605/224-1713  
FAX: 605/224-0172

March 23, 2010

**U.S. FISH & WILDLIFE SERVICE**

Subject: Review of 2010 USDA, APHIS, PPQ South Dakota  
Rangeland Grasshopper Biological Assessment

To: Natalie Gates  
Biologist

From: Amy Mesman  
Domestic Program Coordinator

The U.S. Fish and Wildlife Service  
concurs with your conclusion that the  
described project will not adversely  
affect listed species. Contact this  
office if changes are made or new  
information becomes available.

4/1/10 *Scott Larson*  
Date *Acting* SD Field Supervisor  
USFWS

We are seeking your concurrence on the endangered species protection measures as described in the attached species assessment section of our 2010 Rangeland Grasshopper Environmental Assessment.

Please consider the following when making your determination for concurrence. Grasshopper outbreaks are cyclical. When they do occur in levels that require control, programs are rarely conducted. Since 1990, only 11 control programs have been conducted on a total of 103,000 acres. Our programs are geared toward rangeland forage protection. We do not treat cropland.

According to our Environmental Impact Statement, we have three chemical control options available to us for grasshopper treatment; dimilin, malathion and carbaryl in both bait and liquid form. When PPQ conducts a program we pay 100% costs of federal land, 50% of the costs on state land and 33% of the cost on private lands.

When conducting control programs we utilize the reduced acre/agent treatment application method known as RAATS or skip swathing. This method leaves approximately 50% of the protected area untreated. Only in the case of a crop protection program would 100% of the area be covered. These programs involve a quarter to half mile buffer treatment on rangeland directly adjacent to agricultural lands to prevent grasshopper migration.

Dimilin is always our preferred choice. Dimilin is a growth regulator, a chitin inhibitor. Based on the selective mode of action, chemical price and available cost share, dimilin continues to be the most cost effective product when conducting grasshopper control



APHIS - Protecting American Agriculture  
An Equal Opportunity Employer

over large areas of rangeland. Dimilin is a more environmentally friendly product and has the fewest non target impacts of the three products available for our use.

In regards to crop protection programs, based on the time of year in which these programs typically occur, life stage of the grasshopper and the need to quickly eliminate the threat of grasshopper migration into adjacent lands, malathion or carbaryl would be the preferred options.

In our initial discussions, your concerns have centered on the western prairie fringed orchid and the American burying beetle.

Western Prairie Fringed Orchid:

According to your agency the orchid is considered extirpated from South Dakota. In addition, of the 10 hawk moths that have been identified as potential pollinators for the orchid only four occur in counties addressed in our environmental assessment. Of those four, only one is considered a proven pollinator. The immature stage of this moth is feeds primarily on *Vitis spp.* These species, if found in the identified counties would be located in areas associated with high moisture or drainages and would be buffered from treatment. Furthermore, the labeled rates of dimilin identified to control lepidopteron pests are substantially higher than the rates used to control grasshoppers in the nymphal stage. PPQ will protect a three mile buffer around known Western prairie fringed orchid locations. Based on these reasons we have determined that there would be no effect from control activities.

American Burying Beetle (ABB)

The ABB is a strongly nocturnal beetle. It is rarely found above ground during the daytime hours. Once eggs are laid it spends its life cycle below ground. The main population of ABB in South Dakota is found in Gregory and Tripp Counties below South Dakota highway 18 and extending into Todd County. We agree to protect the primary population of ABB by not conducting control activities in Gregory and Tripp Counties below highway 18. Furthermore we will provide a two mile buffer around known locations in Todd and Bennett Counties. Bennett County being a single find in the extreme southeastern part of the county.

Based on their strong nocturnal activity, timing of our applications, the two mile buffer around known locations, the elimination of all grasshopper treatment within the ABB primary range, and the preferred use of dimilin, we feel our program activities are not likely to adversely affect the ABB population.

If you should have any questions or concerns please feel free to contact me at 605/224-1713 or via email at [amy.mesman@aphis.usda.gov](mailto:amy.mesman@aphis.usda.gov). We are seeking to finalize our environmental documentation and are hoping for your concurrence by March 30, 2010 so that we can release the document for public comment. Thank you.

Sincerely,



Amy Mesman  
Domestic Program Coordinator

Enclosure